

19990211.ba v02_n427.bam.990211

>From ???@??? Thu Feb 11 20:21:22 1999
Message-Id: <199902111906.NAA07478@sco.theporch.com>
Date: Thu, 11 Feb 1999 13:04:45 CST
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 2427

BOATANCHORS Digest 2427

Topics covered in this issue include:

- 1) Trade roller(s) for roller
by zeitler@ibm.net
- 2) FS: Bendix TA-12D
by Tom Laszynski <k8jrm@ionet.net>
- 3) FS: Bendix TA-12D
by Tom Laszynski <k8jrm@ionet.net>
- 4) Tube Collectors Club & Newsletter
by "John Dilks, K2TQN" <oldradio@worldnet.att.net>
- 5) Re: Beryllium
by "Barry L. Ornitz" <ornitz@tricon.net>
- 6) Re: Interesting Transmitter Problem... (Results... almostsolved)
by "Arden Allen" <gumbear@pacbell.net>
- 7) Mil equivalents of Hammarlund models
by AviDov@aol.com
- 8) BA's in movie "Air Force" (1943)
by Ray Mote <rmote@rain.org>
- 9) Re: BA's in movie "Air Force" (1943)
by Michael M Oxenreider <wb3ctc@juno.com>
- 10) Re: Mil equivalents of Hammarlund models
by Al Klase <skywaves@bw.webex.net>
- 11) Re: Eimac SK 606
by N5CM@aol.com
- 12) Beryllium
by agemi <agemi@stc.net>
- 13) Re: FS: Bendix TA-12D
by Andre Guibert <aguibert@sympatico.ca>
- 14) More resistor Info
by mack@mails.imed.com (Ray Mack)
- 15) Submarine Signal Company
by Chip Owens <owens@atd.ucar.edu>
- 16) Testing 813 transmitter tubes
by Chip Owens <owens@atd.ucar.edu>
- 17) Tinsel wire
by Ray Mote <rmote@rain.org>
- 18) Bits FS

by BEN NOCK <G4BXD@compuserve.com>
19) The SS Company
by "Katz, Gene S" <gene.s.katz@lmco.com>
20) Funky tubes!
by "Roberta J. Barmore" <rbarmore@indy.net>

From: zeitler@ibm.net
Message-ID: <000d01be5571\$36d8dd00\$72292581@km3g>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Trade roller(s) for roller
Date: Wed, 10 Feb 1999 19:47:05 -0800
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

I have two military coupler units. No reference desig. on the front panel but they both use a Johnson 229-202 roller coil (18uH #12 wire). They each also have four ceramic trimmer caps which are fine tuned from the front panel in "set and forget" fashion. One of the couplers says "2-3Mhz" and the other says "4 - 5.5 mhz". RF Communications, INC apparently is the manufacturer as this is the name on the front panels.

I would like to trade both of these units for a Johnson 229-203 roller coil. I have a homebrew copy of the MFJ 986 differential-T tuner and the coil that was used is TERRIBLE. I think it is on a Delrin core and with higher power levels the impedance starts to change which effects the tuning of my hf amps. Yuk!!

So I will be removing the Delrin core unit in hopes of installing the big Johnson 229-203.

So if interested in an even swap let me know. Both of the military coupler units for a Johnson 229-203 roller coil (or equiv.).

73s and Gob Bless for now.

Lane Zeitler
Ku7i
San Diego

Message-Id: <3.0.1.16.19990210221815.4337f65e@ionet.net>
Date: Wed, 10 Feb 1999 22:18:15
To: Old Tube Radios <boatanchors@theporch.com>
From: Tom Laszynski <k8jrm@ionet.net>
Subject: FS: Bendix TA-12D

Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Oklahoma City, OK 73150-8028, USA
E-mail: k8jrm@ionet.net

Message-Id: <3.0.1.16.19990210221920.4d5f6d06@ionet.net>
Date: Wed, 10 Feb 1999 22:19:20
To: Old Tube Radios <boatanchors@theporch.com>
From: Tom Laszynski <k8jrm@ionet.net>
Subject: FS: Bendix TA-12D
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Bendix Radio Aircraft transmitter, model TA-12D, for sale. The serial number is C1-94. I know very little about this unit. I have pulled the case. It appears the to use a pair of 807s as an RF power RF driven by a single 807. The bottom row of jacks (I.P.A.P, P.A.P., Local-Rem and Key) has been cannibalized (removed). The wiring harness is unharmed except where the run to these four jacks was cut. It would appear to be a simple matter to install replacements. However, without a schematic, I cannot be sure what the exact replacement would be. Apart from these missing items, the radio appears to be in good condition. The front panel no scratches or dings. The R.F. Ammeter seems to be good condition. The case is in good shape! Printed on top of the cabinet is a crown with a large letter A and M on either side of it. Immediate below this is Ref. No. 110-D-40. I offer this set for sale for \$40 with you paying UPS shipping and insurance from Oklahoma City.

Tom, K8JRM

Oklahoma City, OK 73150-8028, USA
E-mail: k8jrm@ionet.net

Message-ID: <36C250B3.7663@worldnet.att.net>
Date: Wed, 10 Feb 1999 22:38:27 -0500
From: "John Dilks, K2TQN" <oldradio@worldnet.att.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Tube Collectors Club & Newsletter
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

To all BA,

A group of collector-historians has recently formed the Tube Collectors Association. This is in response to the need for a focused group dedicated to the growing activity of collecting radio/wireless tubes and to sharing historical insight about them. As a tube enthusiast, you'll probably be interested in this development, and may want to help guide the activities of the group from the start.

For more info:

<http://www.eht.com/oldradio/tubecollectors/index.html>

--

73' John Dilks, K2TQN

Please visit my OldRadio Museum

<http://www.eht.com/oldradio/museum>

Webmaster for the Antique Wireless Association

<http://www.ggw.org/awa> Click on "Page 2"

--and--

for the New Jersey Antique Radio Club

<http://www.eht.com/oldradio>

-

From: "Barry L. Ornitz" <ornitz@tricon.net>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: "Boatanchors Mailing List" <boatanchors@theporch.com>
Subject: Re: Beryllium
Date: Thu, 11 Feb 1999 00:07:42 -0500
Message-ID: <01be557c\$73d81800\$944562d8@ornitz.dpnnet.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

If Jack will permit one more post on this...

Ray Mote wrote:

<He told a story of how they demonstrated the early
>high-power lasers by blasting holes in steel plate up on stage, with
>firebrick as a backstop. Seems the demonstrators and some of the guys
>in the front row (usually bigwigs) didn't live too long after that.
>They finally figured out that it was Beryllium dust coming off the
>firebrick every time it was hit...

I think this is an urban legend. Firebrick is the last thing you would want beryllia in. Firebrick is usually a mixture of aluminum and magnesium oxides. Chromium oxide is used as an additive for certain applications (like the coal gasifiers I used to work with). Silica is added to hold the brick together. The entire purpose of firebrick is to act as a thermal insulator - just the opposite of what beryllia does. Remember beryllia conducts heat better than metallic aluminum.

I wrote a rather long post on beryllium and beryllia several years ago for this group. I do not have a copy, but I believe it may be archived. I also discussed beryllium copper alloys at that time and why grinding them without respiratory protection was not a good idea. I suggest those interested look this post up.

73, Barry L. Ornitz WA4VZQ ornitz@tricon.net

Message-Id: <199902110536.VAA00507@mail-gw6.pacbell.net>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Interesting Transmitter Problem... (Results... almostsolved)
Date: Wed, 10 Feb 1999 21:22:24 -0800
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Hi again Jack;

> (1) I assume that the 0.001uF capacitor is bleeding off the vhf
> parasitic stuff to ground and is not bothering the lower frequency good
hf
> which makes sense to me -- but what's the purpose of the 22K resistor? I
> can look at it as an RC circuit that is tuned more or less to vhf or I
can
> look at it as simply a low-impedance path to ground for the vhf stuff
with
> a current limiting resistor for some reason. Which (if either) is the
> correct interpretation?

Well, neither is the correct interpretation. Lets take a look at a regenerative amplifier: A regenerative amplifier is one in which some of the output signal is fed back to the input IN PHASE. The desirable effect is to increase the gain of the amplifier. The complete theoretical analysis gets rather involved, I'll leave that to others who are better at that sort of thing than me. If the positive feedback results in a LOOP GAIN of less than 1, you have a regenerative amplifier. If the positive feedback results in a loop gain of exactly 1 you are in Never-never Land, which means that as soon as you go above 1 the amplifier becomes an

oscillator and produces its own self sustaining signal. When you adjust the feedback on a regenerative detector you are trying to get as much gain as you can without breaking into oscillation, unless you need a BEAT FREQUENCY OSCILLATOR to produce an audible heterodyne (the result of mixing two frequencies) in order to copy a CW signal.

Any practical amplifier is a potential oscillator if care is not taken to reduce positive feedback at all frequencies to below the point at which oscillations can occur. You cannot eliminate positive feedback at all frequencies but you can reduce feedback coupling or you can adjust the phase of the feedback to reduce the loop gain or you can introduce NEGATIVE FEEDBACK (as in neutralization) to counteract the positive feedback.

An unintentionally oscillating radio frequency amplifier can be categorized as being one of two types, one that oscillates at or near its intended operating frequency, or one that oscillates at a frequency far removed from its operating frequency. All circuits have what are called NATURAL FREQUENCIES. An IF or RF coil obviously has a natural frequency as it was designed for. Like the microscopic parasites that inhabit all of our bodies (some more than others.....heh, heh), the self inductance of a length of hook-up wire and the interelectrode capacitance of a tube can form a PARASITIC TANK CIRCUIT. Because of the small values of inductance and capacitance in a parasitic tank circuit the resonant frequency is usually in the VHF region where there is still sufficient amplification to produce oscillation.

Trying to sort out what the cause of oscillation is in an amplifier mandates that one know the FREQUENCY OF OSCILLATION. An oscillation frequency can be determined with an oscilloscope (if direct connection to the circuit kills the oscillation the oscilloscope probe can be used to "sniff" the offending signal by bringing the probe into close proximity with the oscillating amplifier's components). A frequency counter can also be used in a similar manner. A wavemeter (or GDO in wavemeter mode), when tuned through the frequency of oscillation will "suck" energy out of the circuit reducing the oscillation amplitude or even kill the oscillation. Another radio receiver can also be used to locate the frequency.

In response to your question, Jack, the .001 cap is a DC blocking cap to prevent the resistor from burning up or imposing an unnecessary load on the power supply. The reactance of the capacitor is low at the circuit operating frequency so the only thing that comes into play is the value of the resistor. The resistor serves to LOAD the plate circuit thus reducing the plate TANK CIRCUIT Q which reduces the gain. Your oscillation is not likely to be a VHF parasitic, you need to determine the frequency. Something is askew and not having a schematic in front of me it is hard to give you more suggestions. Don't give up.

Arden Allen KB6NAX Vallejo, CA gumbear@pacbell.net

From: AviDov@aol.com
Message-ID: <9f2ca864.36c26d88@aol.com>
Date: Thu, 11 Feb 1999 00:41:28 EST
To: Old Tube Radios <boatanchors@theporch.com>
Mime-Version: 1.0
Subject: Mil equivalents of Hammarlund models
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7bit

Where can I cross ref the following Mil receivers to their Hammarlund models
:?

R-274/FRR; R-274A/FRR ; R-274C/FRR ;R-274D/FRR ;
R-320A/FRC;R-483/FRR and R-483A/FRR

Is the SP-600 one of the above or some other Mil nomenclature ?If so is there
a

Mil TM 11- ? # for this rcvr ?

73

Date: Wed, 10 Feb 1999 23:22:21 -0800 (PST)
From: Ray Mote <rmote@rain.org>
To: Old Tube Radios <boatanchors@theporch.com>
cc: Barry Ornitz WA4VZQ <ornitz@tricon.net>
Subject: BA's in movie "Air Force" (1943)
Message-ID: <Pine.SUN.4.05.9902102316001.26615-100000@coyote.rain.org>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Really strange to see an old PW dial (a la HRO) at the radio operator's
position in that B-17! It's seen several times, including while the
crew listens to FDR's speech while airborne. The headsets (presumably
HS-23's) and throat mikes were correct, though. That must have been a
really early B-17, what with the football-shaped waist gun openings and
the *door* between waist gun opening and starboard wing, as well as the
lack of a tail gun. And, wonder of wonders, they even referred to a
call "on the Command Set".

Just prior to that movie was "Objective Burma" made in 1945. They
really trashed an SCR-536 (blew it up), but the op cranking the SCR-284
didn't seem to be working too hard.

Re: Barry's note -- I stand corrected.

Ray Mote, K5FKT <rmote@rain.org> Oxnard, CA

To: Old Tube Radios <boatanchors@theporch.com>
Cc: boatanchors@theporch.com, ornitz@tricon.net
Date: Thu, 11 Feb 1999 05:00:17 -0500
Subject: Re: BA's in movie "Air Force" (1943)
Message-ID: <19990211.053021.-24451.8.WB3CTC@juno.com>
MIME-Version: 1.0
Content-Type: text/plain
Content-Transfer-Encoding: 7bit
From: Michael M Oxenreider <wb3ctc@juno.com>

The B-17's in Air Force were early models as was proper.
Don't know why radio equipment was treated as secret.
A lot of disinformation about radio equipment in all media.
The Navy is still that way . I find it a little funny due to the
Walker spy ring.
73 Mike

On Wed, 10 Feb 1999 23:22:21 -0800 (PST) Ray Mote <rmote@rain.org>
writes:
>Really strange to see an old PW dial (a la HRO) at the radio
>operator's
>position in that B-17! It's seen several times, including while the
>crew listens to FDR's speech while airborne. The headsets
>(presumably
>HS-23's) and throat mikes were correct, though. That must have been
>a
>really early B-17, what with the football-shaped waist gun openings
>and
>the *door* between waist gun opening and starboard wing, as well as
>the
>lack of a tail gun. And, wonder of wonders, they even referred to a
>call "on the Command Set".
>
>Just prior to that movie was "Objective Burma" made in 1945. They
>really trashed an SCR-536 (blew it up), but the op cranking the
>SCR-284
>didn't seem to be working too hard.
>
>Re: Barry's note -- I stand corrected.
>
>Ray Mote, K5FKT <rmote@rain.org> Oxnard, CA
>
>

Message-ID: <36C2D125.1BECEA8C@bw.webex.net>
Date: Thu, 11 Feb 1999 07:46:29 -0500
From: Al Klase <skywaves@bw.webex.net>

MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
CC: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Mil equivalents of Hammarlund models
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Avi,

I have only a partial answer to your question. Two quite different receivers were built to the basic R-274 spec.: the SP-600 and the Hallicrafters SX-73. Two designations, that I have references to, for the SX-73 are R-274/FRR and R-274D/FRR. Perhaps someone else can fill in the puzzle.

73,
Al

AviDov@aol.com wrote:

>
> Where can I cross ref the following Mil receivers to their Hammarlund models
> :?
> R-274/FRR; R-274A/FRR ; R-274C/FRR ;R-274D/FRR ;
> R-320A/FRC;R-483/FRR and R-483A/FRR
>
> Is the SP-600 one of the above or some other Mil nomenclature ?If so is there
> a
> Mil TM 11- ? # for this rcvr ? 73

--
Al Klase - N3FRQ
skywaves@bw.webex.net
Flemington, NJ 08822
Web Page: <http://www.webex.net/~skywaves/home.htm>

From: N5CM@aol.com
Message-ID: <daf6c627.36c2e2f2@aol.com>
Date: Thu, 11 Feb 1999 09:02:26 EST
To: Old Tube Radios <boatanchors@theporch.com>
Cc: boatanchors@theporch.com
Mime-Version: 1.0
Subject: Re: Eimac SK 606
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7bit

Thanks a meg Bobbi,

The "made in USA" Eimac SK 606 is 2 3/8" tall 1 5/8" diameter with a ceramic sleeve which is held in place when plugged into the socket.

The ceramic sleeve is tapered and measures 7/8" tall by 2 1/8" top diameter and 2" bottom diameter. It is not permanently attached to the tube.

I did not know about this "BOATANCHOR" group when I decided to dismantle the unit which was apparently a UHF transmitter in a box made of brass! the SK 606 has the finned anode and was forced air cooled.

The tube base has 8 pins symmetrically arranged about the size of an octal tube configuration but the pins are very small in diameter - about like the pins on a miniature tube.

73, Ken....N5CM....

Date: Fri, 5 Feb 1999 18:50:24 -0500
From: agemi <agemi@stc.net>
Message-ID: <17785.990205@stc.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Beryllium
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

One source of BeO is some transistor insulating pads. T0-3 In the 1960-70's I used some T0-3 and rectifier studs styles on military power supplies. they were of a laminated white construction. The military put out a order, that they were not to be used in any new design.

I knew a engineer who worked with BeO during the early days of the atom bomb. For ~ 8 years he had to have quick access to Oxygen, he carried a small tank with him 24 hrs a day. As I remember from my work, BeO was used with Radium as a Neutron source among other applications.

Roger KD4AS

Best regards,
Agemi <mailto:agemi@stc.net>

Date: Thu, 11 Feb 1999 10:12:00 -0500 (EST)
Message-Id: <199902111512.KAA06521@smtp11.bellglobal.com>

Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
To: Old Tube Radios <boatanchors@theporch.com>
From: Andre Guibert <aguibert@sympatico.ca>
Subject: Re: FS: Bendix TA-12D

>
> Bonjour Tom and All
>
> The TA-12D was used by the RCAF(Royal Canadian Air Force)
> in the Canadian built Mosquitos and Lancasters to name
> a few during WW2, where phased out in 45/46.
> A 4 chanel 40w tx using the MP-28B PS/Modulator
> Its companion receiver is the RA10-DB.
> The broad C and Arrow means"Crown Assets", AM is "Royal".
> IPA and PA jacks are for metering, "Local/Remote" and "Key"
> are simple PB's, with a screw on cap on the L/R pb.
> Built under license from Bendix by Northern Elecric, RCA
> and Canadian Marconi.
>
> Andre
> Acres of Boatanchors
>
>
>
>
>
>
>
>
>
johanne

Mime-Version: 1.0
Date: Thu, 11 Feb 1999 10:08:57 -0600
Message-ID: <0016305C.@mails.imed.com>
From: mack@mails.imed.com (Ray Mack)
Subject: More resistor Info
To: Old Tube Radios <boatanchors@theporch.com>
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit
Content-Description: cc:Mail note part

Hey y'all:

With all of the hoo-hah around here with the plant closing
announcement last week I have been out of order reading the digests, so
I think I never saw the *exact* answer to Morris' question.

If my 30 year old memory serves correctly the sequences for

20% and 10% tolerances were the same. You just basically got resistors from very poorly controlled processes with 20% parts. By the time I started in electronics 30 years ago, only *really* old and *really* cheap stuff used 20% resistors.

As just about everyone said, those values mentioned (like 46.4 and 47.5) are the values you can actually buy when you go to 1% values. There is an actual reason for each of the tolerance value sequences. I'll explain by using the first few values of each sequence.

In the 10% sequence you get these values:

1.0, 1.2, 1.5, 1.8, 2.2, 2.7, 3.3

In the 5% sequence you get these values:

1.0, 1.1, 1.2, 1.3, 1.5, 1.6, 1.8, 2.0, 2.2

In the 1% sequence you get the following values:

1.00, 1.02, 1.05, 1.07, 1.11, 1.13, 1.15, 1.18

Now for the reasons for the numbers.

In the 10% sequence we start with 1 ohm and multiply each time by 1.2 and then round to the nearest 2 digits which puts each +/- 10% value pretty close for all the steps. The gaps are pretty small when they occur. For example 90% of 1.5 is 1.35 and 110% of 1.2 is 1.32.

The 5% sequence multiplies each step by 1.1 and round to the nearest 2 digits. There is some overlap due to rounding in this sequence especially at the low end, but gaps occur at the high end.

The 1% sequence multiplies each step by 1.02 and round to the nearest 3 digits or very close to that value. Morris' example of 46.4 and 47.5 is actually a step of 1.024.

They probably allowed some gap between steps in each of these sequences because they would otherwise have a significant increase in the number of values with no real gain in actual utility for design engineers. You would be surprised at how many systems have tolerances of +/- 20% or more. It sounds like a lot until you convert to dB and realize that +/- 20% is the same as +/- 1 dB!!

Ray Mack
WD5IFS

mack@mails.imed.com

Message-ID: <36C3040C.A0CED6BB@atd.ucar.edu>
Date: Thu, 11 Feb 1999 09:23:40 -0700
From: Chip Owens <owens@atd.ucar.edu>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Submarine Signal Company
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

-- At the local surplus store I found a heavy duty plate transformer made by the Submarine Signal Company of Boston, Mass. It has the designation : CRP-30345 on the ID plate. This is a true Boatanchor transformer as it weighs in excess of 100lbs. The primary is 115v/60Hz and the secondary is 1,470v c.t. @ 1.2 amps! There is the US Navy "anchor" stamp on the case. The lamination stack is 8" x 10" x 4 1/4" and there are heavy duty end bells that are castings with cooling fins.

Curiosity has got me asking if the Submarine Signal Company was a manufacturer of radio equipment, or is it a transformer maker only? I have not heard of them before. Has anyone knowledge of the company and did they specialize in radio gear for sumarines as the name would imply?

Thanks!, Chip, NW00

Chip Owens (owens@atd.ucar.edu)

Message-ID: <36C3051F.9789BA85@atd.ucar.edu>
Date: Thu, 11 Feb 1999 09:28:15 -0700
From: Chip Owens <owens@atd.ucar.edu>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Testing 813 transmitter tubes
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

--Can anyone suggest a method of testing 813's? I have picked up a few recently and would like to screen them before building up a transmitter project based on their use. I've checked the filaments, but would like to do an emission test to see what condition they are in. Has anyone done this who could offer some tips on testing 813's or similar transmitter tubes?

Thanks, Chip, NW00

Chip Owens (owens@atd.ucar.edu)

Date: Thu, 11 Feb 1999 09:41:03 -0800 (PST)
From: Ray Mote <rmote@rain.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Tinsel wire
Message-ID: <Pine.SUN.4.05.9902110928320.8711-100000@coyote.rain.org>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

The WW2 cordage for the HS-23 & HS-33 headsets uses "tinsel wire", which is highly flexible without being subject to breakage like ordinary stranded copper wire.

This stuff has several "strands", with each strand made up of a cotton string closely spiral-wrapped with two flat strips of copper. It's the cotton string that makes it darned near impossible to solder. (Yes, you can tightly wrap very small bare wire around it, then flow solder into that layer and attach a crimp lug.) Normal connection was to use crimp lugs with a pair of "sawteeth" to punch thru the insulation and make contact with the copper.

Having rehashed what most of you know, I've got a dim memory of something where there was perhaps only a single strip of copper that had considerable spacing between turns around the string, and was even more of a pain to work with. Could this have been some cheap commercial imitation? Anybody know if there was a wide variety of grades of tinsel wire?

Ray Mote, K5FKT <rmote@rain.org> Oxnard, CA

Date: Thu, 11 Feb 1999 13:03:56 -0500
From: BEN NOCK <G4BXD@compuserve.com>
Subject: Bits FS
To: Old Tube Radios <boatanchors@theporch.com>
Message-ID: <199902111304_MC2-6A28-806C@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: quoted-printable
Content-Type: text/plain; charset=ISO-8859-1
Content-Disposition: inline

Mk 123 spy set canvas case, green, with straps....20.00
Mk 123 aerial throw-out wire, brown former.....10.00

Mk 121 aerial throw-out wire, perspex former..... 8.00
Mk 123 miniature field voltmeters
m/c meter with neon, flying leads.....18.00
Mk 123 aerial egg insulators, pair,..... 8.00
Mk 123 Universal mains adaptors..... 8.00
Headphones:
"Trimm" USA, 1940, P40 jack, hi Z.....10.00
"ICA" by Insuline NY USA, with plug, 1940, hi Z...10.00
S.G.Brown type F, high Z.....12.00
"BTH" 600 ohm, with jack.....10.00
Ericsson, high z, 2000,.....15.00
Ericsson, low z, 60,.....15.00

(prices in Pounds Sterling only)

all postage extra.

Ben G4BXD=

Content-return: allowed

Date: Thu, 11 Feb 1999 13:37:45 -0500

From: "Katz, Gene S" <gene.s.katz@lmco.com>

Subject: The SS Company

To: Old Tube Radios <boatanchors@theporch.com>

Message-id: <40D23851A09ED211B3430000F8081AD0750759@emss04m16.ems.lmco.com>

MIME-version: 1.0

Content-type: text/plain

The SS Company is now Raytheon (with other acquisitions). They were located in and around Newport, RI near the US Naval Underwater Weapons Station. They were really a sonar and underwater acoustics oriented firm in the old days of wooden ships and iron men. 73,
Gene Katz KC6BLD

Gene

Gene S. Katz

Senior Member Engineering Staff

Lockheed Martin Government Electronic Systems

Bldg 108-136, PO Box 1027

199 Borton Landing Road

Moorestown, NJ 08057-0927

(609)722-3035 *

(609)722-2310 fax

gene.s.katz@lmco.com

Date: Thu, 11 Feb 1999 14:05:11 -0500 (EST)

From: "Roberta J. Barmore" <rbarmore@indy.net>

To: Old Tube Radios <boatanchors@theporch.com>
Subject: Funky tubes!
Message-ID: <Pine.SUN.3.96.990211132801.16387A-1000000@indy3>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi!

Some of the more recent threads (which I will not mention yet, as no doubt some folks are heartily sick of 'em) have had me leafing through the Eimac (back when they were still married to Varian--and had adopted Matchlett) and Burle power-tube catalogs.

It's scary stuff--some of the megawatt tubes look more like something that would be shot from Naval guns, or dropped from a bomber! Loopy devices, like vapor-phase-cooled superhighpower tubes that stay cool--by tube standards!--by boiling off the cooling water. (I'm glad I don't have anything like that; those hissing teakettles are prone to leaks and other problems).

But here's a class of cooling we've kidded about, and some have used, that I never knew was professionally applied: Immersion-cooled tubes! Yep, you dunk 'em in a tank of water (etc.) just like the upside-down 6L6 in a coffee-can of water. They look a lot like forced-air-cooled tubes, but the cooling fins are smaller and set wider apart. Pretty neat! Some of this family are specifically mentioned for aircraft service, and seem to be RADAR pulse & regulator tubes, so perhaps the collectors of OD Green have seen 'em.

And now, on the (scream and run!) topic of conduction-cooling; some of that family of tubes have BeO, some just have an unfinned external anode and it's the user's problem how they wanna haul the heat away. The 4CS250R, you would not want--comes with BeO link brazed on, no doubt by some dark art. 8560AS is clean--but mind the thing it's bolted to, SK-1920, a big chunk of The Stuff. Ditto the 8873 (and it had such a fine number, too!). The 4657, 7843, and 8072, all nice little ~100W power tetrodes, seem to be of the unfinned-bare-anode sort, okay in and of themselves but mind what is clamped to the anode! Some klystrons have BeO "windows" where the RF output is taken off, too, so if a klystron drops out of the sky in front of you, you might wanna look it up before bashing it with a shovel. ;)

And now, a little something to take the sting out: at low HF, say 160m anyway, it would probably be quite practical to run a conduction-cooled tube with a *metal* heatsink and no insulator; one big reason for the tricky material is to reduce capacity from plate to ground, but at 160, a clever soul could just use that as part of the plate tank condenser! Yes, it would be at high voltage, but you'd want it in a grounded metal cabinet anyhow. Why bother? Well, with a big enough heatsink, you could run high power and not need a blower, which seems kind of appealing. If you're a

real A-1 machinist, a combined heatsink/condenser would be an interesting project. I suspect you'd have to really *enjoy* tuning the rig with this kind of setup, however....!

73,
--Bobbi

KB9GKX "RJ" rbarmore@indy.net Roberta J. (Bobbi) Barmore
FISTS #3388 * G-QRP #10001 * ARRL * RSGB * WIA
Appreciator Of Vacuum-Tube Ham Gear and Vintage Keys

End of BOATANCHORS Digest 2427
